



Attorney Docket No.: 42390.P10398

Patent

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Leeper, David G.  
Serial No. 09/964,820  
Filed: 09/26/2001  
Title: Apparatus and Method for  
Handoff in a Wireless System

Group Art: 2634

Examiner: File, Erin

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**APPEAL BRIEF**

**IN SUPPORT OF APPELLANT'S APPEAL**

**TO THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Sir:

Pursuant to Appellant's Notice of Appeal filed on March 27, 2006, Appellant hereby submits this Brief in support of their Appeal from the Final Action dated December 27, 2005. Appellant respectfully requests consideration of this Appeal by the Board of Patent Appeals and Interferences for allowance of the claims in the above-captioned patent application.

06/27/2006 CNGUYEN2 00000032 09964820

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## **I. REAL PARTY IN INTEREST**

The invention is assigned to Intel Corporation of 2200 Mission College Boulevard, Santa Clara, California 95052.

## **II. RELATED APPEALS AND INTERFERENCES**

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal that will directly affect, be directly affected by, or have a bearing on the Board's decision.

## **III. STATUS OF CLAIMS**

Claims 1-3, 5-12, 14-17 and 23-25 are pending in the application. Claims 4, 13, and 18-22 have been canceled. Claims 1-3, 5-12, 14-17 and 23-25 have been finally rejected. The rejections of independent Claim 1 and its dependent claims, independent Claim 14 and its dependent claims, and independent Claim 23 and its dependent claims are appealed.

## **IV. STATUS OF AMENDMENTS**

All amendments filed to date have been entered into the record. No amendment after final was made.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

Embodiments of the present invention relate to a communication system (FIG. 1, 100) having multiple masters (FIG.1, 30, 31, 32, and 33) that provide communication between a network (FIG.1, 60) with a slave device (FIG. 1, 40). (Specification, page 7,

line 9 – p. 8, l. 3) To reduce the risk of neighboring master devices interfering with each other, the master devices may use different hopping sequences that vary the transmission frequency of the master device over time so that neighboring master devices are likely to be transmitting at a different frequency. (Spec., p. 8, ll. 4-11) If the slave is a mobile device, the responsibility for maintaining communication between the slave and the network may be transferred to another master as the mobile device moves away from a master handling its communication. (Spec., p. 8, ll. 12-21) Handoff between master devices is complicated if the other master device is transmitting with different hopping sequences. Handoff is further complicated due to rules and regulations that govern the operation of communications systems – for example, an FCC prohibition on any form of central control to coordinate the hopping sequences used by various master devices in a Bluetooth network. (Spec., p. 2, ll. 4-20)

Referring to Appellant's independent Claim 1, by way of example, a method is claimed which includes polling (FIG. 3, 320) a first master transmitting device (FIG. 1, one of masters 30-33) with a second master (FIG. 1, another of masters 30-33) to determine a hopping sequence of the first master transmitting device. (Spec., p. 10, l. 21 – p. 11, l. 10) Further, the polling the first master transmitting device includes determining whether the first master transmitting device is receiving a signal from a slave transmitting device. (FIG. 1, 40, FIG. 3, 320, Spec., p. 10, l. 21 – p. 11, l. 10)

Referring to independent Claim 14, by way of example, a method of transferring communication from a network (FIG. 1, 60) to a slave device (FIG. 1, 40) is claimed which includes notifying a first master (FIG. 1, one of masters 30-33) of the hopping sequence of the slave with a second master (FIG. 1, another of masters 30-33) and polling

the first master from the second master to determine if the first master is receiving a signal from the slave device. (FIG. 3, 320, Spec., p. 10, l. 21 – p. 11, l. 10)

Referring to independent Claim 23, by way of example, an article is claimed which includes a storage medium having stored thereon instructions, that, when executed by a computing platform (FIG. 2., 200, Spec. p. 5, l. 12-22, and p.8, l. 21 – p. 9, l. 17) results in: notifying a first master (FIG. 1, one of masters 30-33) of a hopping sequence of a slave (FIG. 1, 40) with a second master (FIG. 1, another of masters 30-33), wherein the instructions, when executed, further result in polling the first master from the second master to determine if the first master is receiving a signal from the slave. (FIG. 3, 320, Spec., p. 10, l. 21 – p. 11, l. 10)

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

A. Whether the Examiner erred in rejecting Claim 1 and its dependent claims 2-4 and 5-12 under 35 U.S.C. § 102(b) as being anticipated by Trompower et al., U.S. Pat. No. 6,088,591 (hereinafter “Trompower ‘591”).

B. Whether the Examiner erred in rejecting Claim 14 and its dependent claims 15-17 under 35 U.S.C. § 102 as being anticipated by Trompower ‘591.

C. Whether the Examiner erred in rejecting Claim 23 and its dependent claims 24-25 under 35 U.S.C. § 102 as being anticipated by Trompower ‘591.

## **VII. ARGUMENT**

### **The Claims Are Patentable Over Trompower '591**

The Final Office Action dated 12/27/05 has failed to present a prima facie case of anticipation for Applicants' claims. "[F]or anticipation under 35 U.S.C. 102, the reference must teach *every aspect* of the claimed invention ..." MPEP 706.02 (emphasis added). "The identical invention must be shown in as complete detail as contained in the ... claim." *Richardson v., Suzuki Motor Co.*, 868 F. 2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Trompower '591 simply fails to disclose every aspect of the claimed invention.

A. Claim 1 and its dependent claims 2-3 and 5-12 stand finally rejected under 35 U.S.C. 102(b) as being anticipated by Trompower '591. Appellant respectfully requests that these rejections be overturned for the following reasons.

Regarding Claim 1, Trompower '591 as least fails to teach or suggest "polling a first master transmitting device with a second master transmitting device to determine a hopping sequence of the first master transmitting device...wherein polling the first master transmitting device includes determining whether the first master transmitting device is receiving a signal from a slave transmitting device" as recited in Claim 1.

(i) Regarding "polling a first master transmitting device with a second master transmitting device to determine a hopping sequence of the first master transmitting device"

The Final Office Action dated December 27, 2005 asserts that "polling a first master transmitting device with a second master transmitting device to determine a

hopping sequence of the first master transmitting device” is taught in Trompower ‘591 in Col. 21. Trompower ‘591 discloses that a wireless base station 156 transmits a request to another base station 154, 156, and, in return, the base station 154, 156 transmits the contents of its roaming table. The Office Action asserts that these actions are “to determine a hopping sequence of the first master transmitting device” as recited in Claim 1. However, wireless base station 156 already knows the hopping sequence of the base station 154, 156 prior to these actions. Referring to Col. 21, lines 7-36 of Trompower ‘591, wireless base station 156 performs an exhaustive scan to find all possible base stations available. Then, wireless base station 156 selects the base station 154, 156 which provides the best system performance. The wireless base station 156 then adopts the hopping sequence of the selected base station, and proceeds to register therewith. Only after adopting the hopping sequence of the selected base station and registering does the wireless base station 156 request and receive the roaming table. Although the roaming table may contain a hopping sequence, the request for the roaming table is so that the contents of the roaming table in each of the base stations are substantially identical (See Trompower ‘591, Column 21, lines 40 – 45) and not to determine the hopping sequence of the first master transmitting device.

Further, wireless base station 156 selects the base station 154, 156 which provides the best system performance based on, among other things, the number of system hops needed to reach the system backbone. In this context, wireless base station 156 is a slave device and communicates via the selected base station (a master) to the system backbone.

Therefore, Trompower '591 does not teach "polling a first master transmitting device with a second master transmitting device to determine a hopping sequence of the first master transmitting device" as recited in Claim 1.

(ii) Regarding "wherein polling the first master transmitting device includes determining whether the first master transmitting device is receiving a signal from a slave transmitting device"

The Final Office Action asserts that Trompower discloses this claim element with reference to Col. 21 of Trompower, indicating that "the polling which the wireless base station performs includes using information such as signal quality and traffic load which in effect tells the polling master device whether the other master device is receiving a signal from a slave device." Applicant respectfully disagrees. Column 21, lines 7-36 of Trompower discloses a base station performing an "exhaustive scan" in order to determine all possible base stations to which it may register:

"An exhaustive scan, which is known to those having ordinary skill in the art, is one in which scanning for a possible base station continues even after a possible base station is found in order to determine if there are other possible base stations 154, 156 with which may provide for better system performance. Thus, exhaustive scans typically provide that the wireless base station 156 actively or passively scans all channels for a predetermined period of time wherein the predetermined period of time is long enough to give a very high probability of finding all possible base stations available. Following the exhaustive scan, the wireless base station 156 selects the base station 154, 156 which provides the best system performance based on conventional criteria such as signal quality, traffic load, and the number of system hops needed to reach the system backbone 152." Column 21, lines 7-36 of Trompower

An exhaustive scan is not the same as "polling a first master transmitting device with a second master transmitting device to determine a hopping sequence of the first master transmitting device" as recited in Claim 1.

Further, the signal quality of Trompower is indicative of the signal strength between the wireless base station 156 and another base station – not between the other base station and a slave device. Thus, Trompower does not disclose or suggest “wherein polling the first master transmitting device includes determining whether the first master transmitting device is receiving a signal from a slave transmitting device” as recited in Claim 1.

The rejection of Claim 1 is thus unsupported, and must be withdrawn. Claims 2-3, 5-12 depend from allowable Claim 1 and are allowable for at least this reason.

B. Claim 14 and its dependent claims 15-17 stand finally rejected under 35 U.S.C. 102(b) as being anticipated by Trompower ‘591. Appellant respectfully requests that these rejections be overturned for the following reasons.

Regarding Claim 14, Trompower ‘591 at least fails to teach “notifying a first master of the hopping sequence of the slave with a second master and polling the first master from the second master to determine if the first master is receiving a signal from the slave device” as recited in Claim 14.

(i) Regarding “notifying a first master of the hopping sequence of the slave with a second master”

The Final Office Action does not explain where in Trompower “notifying a first master of the hopping sequence of the slave with a second master” is taught.

In Col. 21 of Trompower ‘591, a wireless base station 156 transmits a request to another base station 154, 156, and, in return, the base station 154, 156 transmits the contents of its roaming table which contains the hopping sequences of other base stations



154, 156. In this context base station 156 is a slave device because it communicates via the selected base station (a master) to the system backbone. Therefore, here Trompower '591 does not teach notifying a first master of the hopping sequence of the slave with a second master, but rather teaches the first master notifying the slave of the hopping sequence of other masters. Even with the identification of the wireless base station as a master, the communication includes notifying a first master of the hopping sequence of another master with a second master. No slave device is identified or referred to in a roaming table. (See Trompower '591, FIG. 10 (roaming table) and Col. 16, line 45 – Col. 18, line 49)

Column 19, lines 15-38 of Trompower '591 discusses the procedure to which each base station 154 enters system 150. After a base station 154 has been connected to the system backbone 152, the base station 154 is powered up and completes self-initialization routines. In this context, the base station is a master. Then, the base station generates and broadcasts an entry packet. The entry packet requests other base stations to reply with an entry response packet with includes frequency hopping sequences. With this interpretation, the other base stations replying with the entry response packet could be construed to be “notifying a first master (the base station 154) of the hopping sequence of a second master (the other bases stations).” As demonstrated above, hopping sequences of a slave device with a second master are not identified in an entry response packet (See also Trompower '591, FIG. 9 (entry response packet), Col. 14, l. 33 – Col. 16, line 44). Further, these operations occur during power up of a device, not during “transferring communication from a network to a slave device” as recited in Claim 14.

(ii) Regarding “polling the first master from the second master to determine if the first master is receiving a signal from the slave device”

As explained above in Section A(ii), Trompower ‘591 does not teach “polling the first master from the second to determine if the first master is receiving a signal from the slave device.”

Accordingly, for at least the foregoing reasons, Trompower ‘591 fails to teach the limitations of Claim 14. The rejection of Claim 14 is thus unsupported, and must be withdrawn. Claims 15-17 depend from allowable Claim 14 and are allowable for at least this reason.

C. Claim 23 and its dependent claims 24-25 stand finally rejected under 35 U.S.C. 102(b) as being anticipated by Trompower ‘591. Appellant respectfully requests that these rejections be overturned for the following reasons.

Regarding Claim 23, Trompower ‘591 at least fails to teach the instructions that result in notifying a first master of a hopping sequence of a slave with a second master further result in polling the first master from the second master to determine if the first master is receiving a signal from the slave.

(i) Regarding “notifying a first master of a hopping sequence of a slave with a second master”

As explained above in Section B(i), Trompower ‘591 does not teach “notifying a first master of a hopping sequence of a slave with a second master.”

(ii) Regarding “the instructions.. further result in polling the first master from the second master to determine if the first master is receiving a signal from the slave”

As explained above in Section A(ii), Trompower ‘591 does not teach “polling the first master from the second to determine if the first master is receiving a signal from the slave device.”

Accordingly, for at least the foregoing reasons, Trompower ‘591 fails to teach the limitations of Claim 23. The rejection of Claim 23 is thus unsupported, and must be withdrawn. Claims 24-25 depend from allowable Claim 23 and are allowable for at least this reason.

### **Conclusion**

Appellant respectfully submits that all the pending claims in this patent application are patentable and request that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

If any fee insufficiency or overpayment is found, please charge any insufficiency or credit any overpayment to Deposit Account No. 02-2666.

Respectfully submitted,

Intel Corporation

Date: June 22, 2006 /Rita M. Wisor/

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## **VIII. CLAIMS APPENDIX**

1. (previously presented) A method comprising:  
polling a first master transmitting device with a second master transmitting device to  
determine a hopping sequence of the first master transmitting device;  
wherein polling the first master transmitting device includes determining whether the first  
master transmitting device is receiving a signal from a slave transmitting device.
2. (original) The method of claim 1, wherein polling the first master transmitting device  
includes polling the first master transmitting device across a local area network.
3. (original) The method of claim 1, wherein polling the first master transmitting device  
includes polling the first master transmitting device with a wireless communication.
4. (canceled)
5. (original) The method of claim 1, further comprising informing the first master  
transmitting device of communication characteristics of the hopping sequence of the  
second master transmitting device.
6. (original) The method of claim 1, further comprising transferring responsibility to  
provide communication between a network and a slave transmitting device from the  
second master transmitting device to the first master transmitting device.

7. (original) The method of claim 1, wherein polling the first master transmitting device includes polling a device selected from the group consisting of an access point, a base state, a network node, and a terminal.

8. (original) The method of claim 1, further comprising determining if a signal strength between a slave transmitting device and the second master transmitting device is approaching a predetermined threshold.

9. (previously presented) The method of claim 8, further comprising transferring responsibility to provide communication between a network and the slave transmitting device from the second master transmitting device to the first master transmitting device.

10. (original) The method of claim 1, wherein polling the first master transmitting device includes updating a table of near neighbors.

11. (previously presented) The method of claim 1, further comprising changing the hopping sequence of the first master transmitting device so that the first master transmitting device can communicate with a slave transmitting device.

12. (original) The method of claim 1, further comprising changing the hopping sequence of a slave transmitting device so that the first master transmitting device can communicate with the slave transmitting device.

13. (canceled)

14. (previously presented) A method of transferring communication from a network to a slave device, comprising:  
notifying a first master of the hopping sequence of the slave with a second master; and  
polling the first master from the second master to determine if the first master is receiving a signal from the slave device.

15. (previously presented) The method of claim 14, wherein polling the first master includes transmitting a packet over the network.

16. (previously presented) The method of claim 15, wherein polling the first master includes a wireless transmission.

17. (previously presented) The method of claim 14, further comprising updating a table of near neighbors.

18. – 22. (canceled)

23. (previously presented) An article comprising:  
a storage medium having stored thereon instructions, that, when executed by a computing platform, results in:  
notifying a first master of a hopping sequence of a slave with a second master;

wherein the instructions, when executed, further result in polling the first master from the second master to determine if the first master is receiving a signal from the slave.

24. (previously presented) The article of claim 23, wherein the instructions, when executed, further result in transmitting a packet over the network.

25. (previously presented) The article of claim 23, wherein the instructions, when executed, further result determining if a signal strength between the slave and the second master is approaching a predetermined threshold.



**IX. EVIDENCE APPENDIX**

Not Applicable

**X. RELATED PROCEEDINGS APPENDIX**

Not Applicable



## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application No.	09/964820
Filing Date	September 26, 2001
First Named Inventor	David G. Leeper
Art Unit	2634
Examiner Name	FILE, Erin
Total Number of Pages in This Submission	20
Attorney Docket Number	42390P10398

### ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> PTO/SB/08 <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Basic Filing Fee <input type="checkbox"/> Declaration/POA <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <div>Return Postcard</div>
Remarks		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Gregory D. Caldwell, Reg. No. 39,926 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	June 22, 2006

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Typed or printed name	Gayle M. Bekish		
Signature		Date	June 22, 2006

**FEE TRANSMITTAL  
for FY 2005**

Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.**TOTAL AMOUNT OF PAYMENT** (\$) 500.00**Complete if Known**

Application Number	09/964820
Filing Date	September 26, 2001
First Named Inventor	David G. Leeper
Examiner Name	FILE, Erin
Art Unit	2634
Attorney Docket No.	42390P10398

**METHOD OF PAYMENT** (check all that apply)☒ Check ☐ Credit card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☒ Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

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☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20. ☒ Credit any overpayments**FEE CALCULATION**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500.00
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
Other fee (specify) _____					
SUBTOTAL (2)				(\$)	500.00

**SUBMITTED BY**

Complete (if applicable)

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Signature		Date	06/22/06		